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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

BINGEL et al.

Serial No. 09/701,658

Filed: November 30, 2000

For: METALLOCECE MONOHALIDES

Art Unit: 1713

Examiner: R. Lee

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Honorable Commissioner of
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REPLY BRIEF ON APPEAL

Sir:

Consideration of the following Reply Brief under 37 CFR 1.193 (b) (1) is
respectfully requested.

ARGUMENT

The examiner has, for the first time, indicated that the results shown in the specification are not commensurate in scope with the claims in which the data is offered to support. *In re Dill*, 202 USPQ 805. The examiner points out that there is no data based on the alkenyl and alkylalkenyl complexes nor their fluorinated derivatives nor the thiolate complexes ($Y=S$) (page 9 of Examiner's answer). While this is true one of ordinary skill in the art considers that these radicals should yield equivalent results to the aryloxy species in the working examples. This is confirmed by Tsutsui (US 5,795,838) of record relied on by the examiner, e.g., col. 4, lines 24-29 and col. 5, line 61 to col. 6, line 2. Thus, the data from the claimed species would be expected to be representative of results obtained with the species discussed by the examiner.

Furthermore, one of the claimed species in the specification, dimethylsilane diylbis (2-methyl-4,5-benzoindenyl)-zirconium monochloride (Example 1a) was compared with the closest prior art, one of the preferred species, in Tsutsui (Example 13). Additionally, none of the preferred metallocene species in the reference (exemplified in the working examples) contained the alkenyl, alkylalkenyl or claimed fluorinated derivatives or thiolate ligands mentioned by the examiner. In fact, all the working examples in Tsutsui were directed to the dihalide metallocenes. Thus, applicants have made a comparison with the closest prior art. This should be sufficient to rebut any possible case of obviousness established by the reference.

Finally, as discussed in applicant's Appeal Brief, not only Tsutsui but also Repo teach away from the claimed invention. The preferred dihalide species of Tsutsui is less

active and less soluble than the claimed species while the Repo polymerization runs show that the aryloxy monohalides species which do not contain a bridging element between the indenyl and cyclopentadienyl rings are less active than their dihalide analog.

In summary, the claims are patentable over Tsutsui alone or with Repo because:

- (1) the art does not direct one of ordinary skill in the art to the claimed compounds,
- (2) assuming, *arguendo*, that it does, Tsutsui and Repo teach away from the claimed compounds,
- (3) the claimed species are unexpectedly more soluble and more active than the closest species of this art, i.e., Tsutsui, and
- (4) one of ordinary skill in the art would expect similar results with the other species of the claims.

Respectfully submitted.

KEIL & WEINKAUF

A handwritten signature in black ink, appearing to read "Edward J. Smith", written in a cursive style.

Edward J. Smith
Reg. No. 24,070

1350 Connecticut Ave., N.W.
Washington, D.C. 20036
(202)650-0100
ERJS/sb/kas